

Interview Summary	Application No. 10/602,630	Applicant(s) KIM, SEUNG-HOON	
	Examiner VAN T. PHAM	Art Unit 2627	

All participants (applicant, applicant's representative, PTO personnel):

- (1) VAN T. PHAM. (3) ^{ae}Paul Deabeler (Applicant's representative).
 (2) Wayne Young (SPE). (4) _____.

Date of Interview: 04 April 2006.

Type: a) ☐ Telephonic b) ☐ Video Conference
 c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
 If Yes, brief description: _____.

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


 Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Attorney discussed 112 rejection in light of proposed amendment (attached).

It was agreed that the amendment would overcome the 112 rejection.

A non-final office action will be made if a prior art rejection is made responsive to amendment when filed.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Seung-hoon KIM

Serial No. 10/602,630

Group Art Unit: 2656

Confirmation No. 8987

Filed: June 25, 2003

Examiner: Van T. Pham

For: APPARATUS AND METHOD FOR DETECTING A POSITION OF A PICKUP

PROPOSED AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action mailed January 24, 2006, and having a period for response set to expire on April 24, 2006.

The following amendments and remarks are respectfully submitted. Reconsideration of the claims is respectfully requested.

AMENDMENTS TO THE DRAWINGS:

The attached drawing(s) include changes to FIGS. 1, 2, and 5. The sheets containing FIGS. 1, 2, and 5 replace the original sheets including FIGS. 1, 2, and 5. The legend "PRIOR ART" is added to FIGS. 1 and 2.

In FIG. 5, the term "ROTATION" is changed to —ROTATIONAL— in blocks 502-504 and 506 to improve form.

In FIG. 5, the term "ATP" in block 500 is changed to —ATIP—to improve form.

In FIG. 5, the reference numeral "507" referring to block "DETERMINE WHETHER ERROR HAS OCCURRED" is changed to —508— to be consistent with paragraph [0021] of the specification.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 5, 8, and 10 in accordance with the following:

1. (CURRENTLY AMENDED) An apparatus to detect a location of a pickup in an optical disc, comprising:
 - a pickup reading or writing a signal from or to the optical disc;
 - a spindle motor rotating the optical disc; and
 - a controller determining whether the pickup is located in area of more than 90 minutes of the optical disc, and measuring a rotational speed of the spindle motor to detect a current location of the pickup in the optical disc, wherein the pickup is determined to be located in an area of more than 90 minutes of the optical disc based on ATIP an absolute time-code in pre-groove (ATIP) information recorded on the optical disc, read by the pickup, and provided to the controller.
2. (ORIGINAL) The apparatus of claim 1, further comprising:
 - a motor controller delaying the measuring of the rotational speed of the spindle motor at the current location of the pickup until the rotational speed reaches a desired rotational speed, wherein a distance of a movement of the pickup exceeds a predetermined track number before the measurement of the rotational speed.
3. (ORIGINAL) The apparatus of claim 1, wherein the controller comprises:
 - a memory storing reference rotational speeds of the spindle motor for different areas of the optical disc;
 - a comparator comparing the rotational speed of the spindle motor at the current location of the pickup with the reference rotational speeds and outputting a comparison result indicative thereof; and
 - a location determination unit determining whether the pickup is present in a lead-in area when a current rotational speed is faster than the reference rotational speed at an inner area of

the optical disc and determines whether the pickup is present in another area other than the lead-in area when the current rotational speed is slower than the reference rotational speed in an outer area based on the comparison result.

4. (ORIGINAL) The apparatus of claim 3, wherein the location determination unit determines an error when the pickup is not present in the lead-in area, a program area, or a lead-out area.

5. (CURRENTLY AMENDED) A method to detect a location of a pickup in an optical disc, wherein the optical disc is rotated using a spindle motor, the method comprising:
determining whether the pickup is present in area of more than 90 minutes of the optical disc from an absolute time-code in pre-groove (ATIP) information recorded on the disc;

measuring a rotational speed of the spindle motor at the current location of the pickup when the pickup is determined to be present in an area of more than 90 minutes of the optical disc from ATIP information;

determining that the pickup is present in a lead-in area when the rotational speed of the spindle motor is faster than a reference rotational speed in an inner area of the optical disc; and

determining that the pickup is present in an area other than the lead-in area when the rotational speed of the spindle motor is slower than the reference rotational speed at an outer area of the optical disc.

6. (ORIGINAL) The method of claim 5, further comprising:
delaying the measuring of the rotational speed of the spindle motor until the rotational speed reaches a desired rotational speed, wherein a distance of a movement of the pickup exceeds a predetermined track number before the measurement.

7. (ORIGINAL) The method of claim 5, wherein an error is detected when the pickup is determined not to be present in the lead-in area or in the area other than the lead-in area.

8. (CURRENTLY AMENDED) A method to detect a location of a pickup for an optical disc, rotated which has a lead-in area, a program area, and a lead-out area and which is rotated
using a spindle motor, the method comprising:

recording a signal on the disc;

detecting a current position of the pickup using rotational speeds of the disc at a wobble

speed factor when recording ~~a~~ the signal on the disc, wherein the optical disc stores ~~data~~ data in area of more than 90 minutes and repeatedly records location information in different sections thereof, minutes; and
repeatedly recording location information in different areas of the optical disc.

9. (ORIGINAL) The method of claim 8, wherein the wobble speed factor is a recording speed factor.

10. (CURRENTLY AMENDED) The method of claim 8, further comprising:
reading an absolute time-code in pre-groove (ATIP) information recorded on tracks of the optical disc at intervals of time using the pickup, wherein the ATIP information comprises a manufacturing company, a maximum recording speed, an optimum power, and an initial position of data the optical disc; and
checking the rotational speed of the spindle motor to determine whether the pickup is located in ~~a~~ the lead-in area, ~~a~~ the program area, or ~~a~~ the lead-out area of the optical disc.

11. (ORIGINAL) The method of claim 8, further comprising:
determining whether the pickup is located in the lead-in area, the program area, or the lead-out area when the optical disc is controlled to move at a predetermined wobble constant linear velocity (CLV) speed factor and based on whether the rotational speed of the spindle motor in the lead-in area is about double that of the spindle motor in the program area.

12. (ORIGINAL) The method of claim 11, further comprising:
measuring the rotational speed of the spindle motor when an absolute time-code in pre-groove (ATIP) information at the current position of the pickup is 90 minutes or more; and
checking if the rotational speed of the spindle motor at the current position of the pickup is equivalent to a desired speed obtained when the spindle motor moves at the CLV speed factor.

13. (ORIGINAL) The method of claim 12, further comprising:
delaying the measurement of the rotational speed of the spindle motor until the rotational speed reaches a desired speed and when a distance of a previous movement of the pickup exceeds a predetermined track number.

14. (ORIGINAL) The method of claim 13, further comprising:
monitoring whether a speed error and a phase error are maintained at minimum values for predetermined times to determine a stability of the spindle motor.

15. (ORIGINAL) The method of claim 14, further comprising:
storing reference rotational speed speeds of the spindle motor in the lead-in area, the program area, and the lead-out area of the optical disc according to a speed factor of the optical disc;
comparing the rotational speed of the spindle motor at the current location of the pickup with the reference rotational speeds stored and outputting a comparison result;
determining the pickup to be positioned in the lead-in area when the comparison result indicates that the current rotational speed of the spindle motor exceeds the reference rotational speed at the lead-in area;
determining the pickup to be positioned in the program area or the lead-out area when the comparison result indicates that the current rotational speed of the spindle motor is lower than the reference rotational speed at the lead-out area of the pickup; and
determining an error when the comparison result indicates that the pickup is not currently located in the lead-in area, the program area, or the lead-out area.